UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,150	09/25/2001	Hugh Barrass	062891.0525	1755

7590 09/19/2005	EXAMINER
Baker Botts L.L.P. Suite 600 2001 Ross Avenue Dallas, TX 75201-2980	CHANG, EDITH M

ART UNIT	PAPER NUMBER
2637	

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

✓

	Application No.	Applicant(s)
Office Action Summary	09/964,150	BARRASS ET AL.
	Examiner	Art Unit
	Edith M. Chang	2637

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 July 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-22</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-22</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20050701</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments/Remarks

1.   Applicant's arguments filed on July 01, 2005, have been fully considered but they are not persuasive.

Claim 1:

Argument: Applicants argue that the Rubinstain ('368) does not teach the communication with CPEs using multiple power spectral densities (PSDs), uses only one PSD.

Response: In FIG.2 of the Rubinstain, the LAN/WAN SWITCH 18, the modem 20 and the splitter 22 performs the same function as the SWITCH 12 in FIG.2 of the current application communicating with the one or more CPE devices using a POTS standard and a 10BaseS standard, wherein the POTS and 10BaseS have different PSDs as *recited in the claim*. Even the LAN/WAN SWITCH 18 and the modem 20 of FIG.2 of the Rubinstain performs the same function as the SWITCH 12 in FIG.2 of the current application, communicating with the one or more CPE devices using a ADSL standard (column 2 lines 63-67 '368) and a VDSL standard (column 3, lines 35-42 '368), wherein the ADSL and VDSL have different PSDs as *recited in the claim*.

Claim 15:

Argument: Rubinstain fails to disclose that the initial mode is chosen to be a "high-probability link".

Response: Rubinstain discloses the "high-probability link" of the 10BaseS

system, since the LAN/WAN SWITCH 18 and the modem 20 of FIG.2 ('368) is for the

DATA, the comprises 10BaseS MODEN establishes the high-probability mode link for

the DATA as recited in the claim. The limitation of "the initial mode is chosen to be a

"high-probability link" is not recited in the claim. The limitations described in the

specification are not read in the claim, if the limitations are not recited in the claim.

Argument: Rubinstain does not teach whether any of the bandwidths disclosed

are high-probability with respect to establishing a mode link, as is recited by Claim 25

(should be Claim 15) of Applicants' invention.

Response: the limitation of "any of the bandwidths disclosed are high-probability

with respect to establishing a mode link" is not recited in the claim. The limitations

described in the specification are not read in the claim, if the limitations are not recited

in the claim.

The rejections are upheld in the following:

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Regarding **claim 1, 8 & 13**, in FIG.2 & 3 and column 1 lines 5-7, Rubinstain et al.

teaches a system and its method for transporting Ethernet over digital subscriber lines.

The FIG.2 is the detail of the customer premises in FIG.3 of a high level block diagram

illustrating an optical network unit (0N17 158) connection (column 8 lines 51-55) œs the

FTTN using the VDSL (column 3 lines 28-41).

In F1G.2, the PBX 14 transceives the voice as the POTS signal, the switch 18 of

the LAN/WAN 16 and the MODEMS 20 as a data switch coupled to one or more groups

of telephone 26 and PC 28 (units 26 & 28 as a customer premises equipment/CPE,

column 8 lines15-21) tansceives the 10BaseS data signal; the switch 18 and MODEMS

20 (and the splitter 22) communicates with each group of telephone 26 and PC 28 via a

link carrying the 10Basess + POTS signal that the VDSL/SDL is for the 10Basess data

(VDSL, as the second predetermined PSD/bandwidth/channel); the other PSD is the

one used for 10Basess data such as stated in the table in column 11 lines 5-

10 (as the first PSD) which is complied with ADSL and VDSL using the same

modulation characteristic.

As the Roubinstain's system can use software to modify latency modes (column

7 lines 38-42) and it is well known that the communications with each group of

telephone and PC of the switch and the 10BaseS Modem can be provided by software

embodied in a computer-readable medium. It would have been obvious to a person of

ordinary skill in the art, at the time of the invention, to have the software embodied in a

computer-readable medium to operate the communication between the data switch and

the groups of telephone and PC unites.

Regarding **claim 2**, in FIG.2, Rubinstain et al. teaches substantially simultaneously

communicating with two or more groups of telephone 26 and PC 28 using ADSL and

VDSL for 10BaseS data.

Regarding **claims 5-7**, in column 7 lines 1 1-13, Rubinstain et al. teaches the link

used the 10BaseS data transmission (the first PSD) experiencing substantially high

level noise and high signal attenuation with long exchanging lines as shown in FIG. 1

when the switch or ONU is not located in a serving exchanging building (column 11

lines 41-53, where the noise is a function of the d the length of the wire in feet), and low

level noise on shorter exchanging lines when the switch or ONU is located in a serving

exchanging building (column 7 lines 11-13).

Regarding **claims 9 & 10**, in column 10 line 59-column 11, line 10, Rubinstain et al.

teaches the high-probability mode link based on the modulation characteristic and

complying with such as ADSL and VDSL standards with the same modulation

characteristic (column 11 lines 5-10, wherein the bandwidth complying to both DSL

standards) to establish a VDSL link.

4.   Claims 3-4, 11-12 and 14-22 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Rubinstain et al. (US 6,088,368) in view of Bingel et al. (US

6,775,355 B 1).

Regarding **claims 3-4 & 11-12**, Rubinstain et al. does not explicitly show the

control of the switch, however, it is well known in the art that the control of the switch

includes the provisioning, operating, maintaining, etc. operated by an administrator.

Further, in FIG.20 Bingel et al. teaches the switch controller via an external device 428

receiving the switch positions and channel assignment information (column 36 lines 14-

19, as parameters of the channel/bandwidth/PSD stored in the memory 422) from an

operator (column 36 lines 19-24) in the line selection unit FIG. 19, wherein the switch

direct the first customer premises via coupler A (column 29 line 64-column 30 line 2) for

the MVL transceiver (60 FIG.5 & 6) which is the digital equipment for transceiving the

data signal as show in FIG. 1 & 2 (column 4 lines 44-47).

In FIG. 1 & 2, the low pass filter 36 separate voice to POTS 28 and data signal to

the digital equipment 34 (column 3 lines 25-38). It would have been obvious to a person

of ordinary skill in the art, at the time of the invention, to have the switch control taught

by Bingel et al. in Rubinstain's switch to direct/control the plurality communication

connections coupled to a common device (column 10 lines 33-38) to detect and

minimize the leakage signal (column 6 lines 28-34) to protect the communication

privacy (column 1 lines 25-32).

Regarding **claim 14**, the modified Rubinstain's switch with Bingel et al.'s

teaching, the VDSL (a public standard) is the predetermined PSD to all the PCs.

Regarding **claims 15 & 21**, the modified Rubinstain's switch with Bingel et al.'s

teaching (refer the rationale of claims 3-4 & 1 1-12) discloses a method for establishing

a communication channel between a data switch (18 & 20 FIG.2 (368) and a CPE (26 &

28 FIG.2 '368) comprising:

establishing a modulation channel (column 10 lines 50-54, column 10 lines 60-

63, and the table in column 11 lines 5-18, as a high-probability mode link);

determining a link/channel between the data switch and the first CPE according to

switch position and channel assignment information (column 36 lines 14-19, as

parameters of the channel/bandwidth/PSD stored in the memory 422 ('355) stored in

the memory (422 F1G.20 '355);

the data switch FIG.2 (.368) with the teaching of the switch control in

FIG.21 (.355) and column 10 lines 4-7 ('355), directing, configuring, and communicating

with the first CPE via the determined (the desired) link/mode;

the establishing, directing, reconfiguring, and communicating redone in response to the

desired mode link going down between the CPE unit 28 (or the 10BaseS MODEM 20

connected to the PC 28 ('368) and the 10BaseS MODEM 20 connected to the switch 18

(reestablish the link is one of well-known features of the 10BaseS MODEM).

Regarding **claim 16**, in FIG.2 & 3 and column 1 lines 5-7, Rubinstain et al. teaches

a system and its method for transporting Ethernet over digital subscriber lines. The

FIG.2 is the detail of the customer premises in F1G.3 of a high level block diagram

illustrating an optical network unit (ONU) connection (column 8 lines 51-55) as the

FTTN using the VDSL (column 3 lines 28-37).

Regarding **claim 17**, Rubinstain et al. teaches the high-probability mode link

based on the modulation characteristic and complying with such as ADSL and VDSL

standards (column 11 lines 5- 10, wherein the bandwidth complying to both standards).

Regarding **claim 18**, in F1G.4, Rubinstain et al. teaches header and sync (as

control packets) generated by 83 & 91 in a frame generated by 89 frame formatter and

received by FIG.5A & 5B (68 FIG.5B). The sync and header packets in a frame contain

parameters of the link (column 10, lines 21-30).

Regarding **claim 19**, in FIG.2, Rubinstain et al. teaches the 10BaseS MODEM

providing an interface between the switch 18 and the CPE devices 28. It is well known

in the art that the 10BaseS MODEM having registers to store the parameters of the

link/mode.

Regarding **claim 20**, in column 7 lines 1 1-13, Rubinstain et al. teaches the link

used the 10BaseS data transmission experiencing substantially high level noise and

high signal attenuation with long exchanging lines as shown in FIG. 1 when the switch

or ONU is not located in a serving exchanging building.(column 11 lines 41-53, where

the noise is a function of the d the length of the wire in feet).

Regarding **claim 22**, in F1G.2 & 3 and column 1 lines 5-7, Rubinstain et al.

teaches a system and its method for transporting Ethernet over digital subscriber lines.

The FIG.2 is the detail of the customer premises in FIG.3 of a high level block diagram

illustrating an optical network unit (ONU) connection (column 8 lines 51-55) as the

FTTN using the VDSL (column 3 lines 28-37). In F1G.2, the PBX 14 transceivers the

voice as the POTS signal, the switch 18 of the LAN/WAN 16 and the MODEMS 20 as a

data switch coupled to one or more groups of telephone 26 and PC 28 (units 26 & 28 as

a customer premises equipment/CPE, column 8 lines 15-21) transceives the 10BaseS

data signal; the switch 18 and MODEMS 20 with the splitter 22 communicates with each

group of telephone 26 and PC 28 via the trunk carrying the 10Basess + POTS signal

that the POTS using the public standard for the telephone voice (PTOS, as the first

predetermined PSD); the 10BaseS is the one used for data signal such as stated in the

table in column 11 lines 5-10, wherein the table uses the PSDS complying to both ADSL

and VDSL with the modulation characteristic.

Rubinstain et al. does not explicitly show the control of the switch, it is well-known

in the art that the control of the switch includes the provisioning, operating, maintaining,

etc. operated by an administrator. However, in F1G.20 Bingel et al. teaches the switch

controller via an external device 428 receiving the switch positions and channel

assignment information (column 36 lines 14- 19, as parameters of the

channel/bandwidth/PSD stored in the memory 422) from such as an operator (column

36 lines 19-24) in the line selection unit FIG. 19, wherein the switch direct the first

customer premises via coupler A (column 29 line 64-co1umn 30 line 2) for the

MVL transceiver (60 F1G.5 & 6) which is the digital equipment for transceiving the data

signal as show in FIG. 1 & 2 (column 4 lines 44-47). In FIG. 1 & 2, the low pass filter 36

separate voice to POTS 28 and data signal to the digital equipment 34 (column 3 lines

25-38). It would have been obvious to a person of ordinary skill in the art, at the time of

the invention, to have the switch control taught by Bingel et al. in Rubinstain's switch to

direct/control the plurality communication connections coupled to a common device

(column 10 lines 33-38) to detect and minimize the leakage signal (column 6 lines 28-

34) to protect the communication privacy (column 1 lines 25-32).

With the modified Rubinstain's switch with Bingel et al. 's teaching, the data

switch communicates with the CPE devices according to the setting stored in the

memory by the operator.

As the Roubinstain's system can use sohware to modify latency modes (column 7 lines 38-42) and it is well known that the communications with each group of telephone and PC of the switch and the 10BaseS Modem can be provided by software embodied in a computer-readable medium. It would have been obvious to a person of ordinary skill in the art, at the time of the invention, to have the software embodied in a computer-readable medium to operate the communication between the data switch and the groups of telephone and PC unites.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
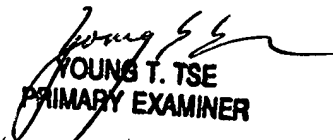
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edith M. Chang whose telephone number is 571-272-3041. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jay K. Patel can be reached on 571-272-2988. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Edith Chang
September 16, 2005

YOUNG T. TSE
PRIMARY EXAMINER